AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

" *O fortunatos nimium sua si bona norint*
" *Agricolas.*" . . . VIRG.

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AGRICULTURE.

From the Memoirs of the Philadelphia Agricultural Society.

Notices for a Young Farmer,

Particularly one on Worn Lands, &c. &c.

WITH NOTES BY THE EDITOR OF THE FARMER.

[Continued from No. 10, page 74.]

Explorations for *Earths* as Manures. Apparatus for *analyzing soils*. Uses of *chymical* and *mineralogical* knowledge to a farmer. *Jersey pyritous* Earth. *Water* to be applied to all its uses in husbandry. Advantages of some knowledge of *practical surveying*, *hydrostaticks*, and the *mechanic powers*. Miscellaneous duties.

X. Explore your own, and the neighbouring farms, for clay, marle, peat, earths, &c. for common benefit, and emulative experiment. Mixing soils of different qualities, improves more lastingly than dung. Some acquaintance with MINERALOGY, would induce you to provide the necessary and simple apparatus required in analyzing soils; and that described and recommended by Lord *Dundonal*; in his " *Connexion between Chymistry and Agriculture*," would be amply sufficient. See 1st vol. Philadelphia Agriculture Memoirs, Selections, p. 57. You may also consult Sir *H. Davy's* Agricultural Chymistry, on this subject.

A moderate share of mineralogical and chymical knowledge, without extending it to the length required in a *Scavan*, will enable you to distinguish the qualities and properties of *earths*; so as to discover in your experiments, whether any substance be or not durably nutritious to plants; or a mere stimulant, (useful in its place, and due proportion,) urging on the operation of other materials, without adding of itself, any thing to the stock required for permanent fertility. It is said, by some, that the *Jersey pyritous* earth, *called* marle, is of this description; and by others, that it is permanently fertilizing. Nothing decisive can yet be pronounced, as its many varieties differ in their respective effects. There are facts both ways; so that this earth when applied, and the soil it is intended to assist, should be carefully scrutinized, and the qualities of both practically known. Some English chymists, to whom it has been sent, style it a *Hydrat of Iron*; whilst others designate its composition, as a collection of decomposed *granite*, *schorl*, *silex*, *alumine*, *iron*; in some specimens, (no doubt, those mixed with shells,) *lime* and *magnesia*, with *sulphur*. A more accurate knowledge of its parts and properties, is still required: and it is to be wished, that our own chymists will give us their assistance. *Broom grass*, and other pests on worn lands, may be destroyed by a top dressing of this earth and chloritic sands of a similar, though not so potent a nature, which substitute a natural growth of white clover. They may be ploughed in, for permanent melioration, after laying for some time. These substances may be found in many parts of our sea-board country.

Render WATER subservient to all its purposes. Dams and ponds for collecting streams and their deposits, are magazines for manure, as well as heads for irrigation of grass, or even tillage crops; and watering is found, in countries wherein it is practised, equally beneficial to both. When springs or streams are absent, dams, to retain the deposits of rain-floods, are highly advantageous; by furnishing temporary irrigation, and, finally, supplies for the compost heap. The *Chinese* have, time out of mind, set examples of constant use of irrigation: and their modes of raising water from rivers, streams, &c. and of applying it, are to be found in many writers. (*a*)

(*a*) IRRIGATION. This word means watering or moistening the land, and comes from the Latin word *irrigo*. All such *hard* words ought to be explained once at least, for the benefit of readers, who are neither Lawyers, Doctors, nor Latin scholars. The means and the benefits of irrigation, or watering, were it seems, well known, and extensively practised, by the aboriginal Americans, on the Pacific Ocean, as is attested by that magnificent internal improvement, called the WORK OF MAYPU, near the capital of *Chile*.

This fertilizing operation is accomplished by conducting the stream of water in a ditch above the field to be watered. The ditch being stopped up at any given point, a trench is opened in the bank and the water is passed any where through the field in small furrows which may be made by two courses of the plough.—These furrows are opened at any desired distance from each other.

Judge BLAND, in his late report concerning that country, attributes, in part, the great product of the Wheat crops in *Chile*, to the practice of *irrigation*. In page 77—78, he remarks :—

" The average production of wheat in the grain country south of Aconcagua, I believe to be truly estimated at about fifty bushels for one sown. The soil of the valleys of Chile, certainly has every external appearance of fertility; but, still I am inclined to believe, that much is to be attributed to the peculiarity of the climate of the middle and northern parts of the state. The grain is sown at the commencement of the rainy season, or soon after it sets in: after that is over, and as it is required, the field is regularly watered from a neighbouring stream: there is not much dew, no rain, and never a wind to break or prostrate the stalk of the grain during the period of its growth: thus furnished with an abundance of moisture at the root, where, for wheat, it seems to be only wanted, a fervid sun, uninterrupted either by fogs, or rains, or heavy blasts, or cold seasons, which, in our country, so often disappoint the hopes of the farmer, urges an uncommonly generous soil to exert all its energies, and gently brings to maturity all its fecundity."

" The soil of the valleys of Chile, is as productive of barley as of wheat; and apparently, for the same reason, but there is not much Indian Corn raised; because, as is said, it requires its top as well as its root to be moistened and refreshed; and, therefore, the climate does not every where suit its growth as well as it does small grain. Chile is no less wonderfully fruitful in the production of hemp than in wheat."

" In the dry regions, the ridges and lesser mountains, which *cannot be watered*, seemed to be condemned to perpetual pasturage: they are annually clothed with a rich coat of grass, which is slowly ripened, and gradually dried into hay, in which state it remains on the ground as good food for the cattle until the first rain in autumn, when it is spoiled or swept off, and there follows a season of scarcity of about two months, until this mountain grass springs up again." [His description of the famous *work of Maypu*, in our next.]

Acquire some knowledge of PRACTICAL SURVEYING, and procure a small Compass, or a plane table, or cross at least, with a chain and level. You will thereby be enabled to lay out your water courses, drains and ditches, to the greatest advantage. You could, also, lay out your fields regularly, and you should note their contents, and designate them by names, or descriptions. Too large enclosures are not beneficial, smaller fields afford more changes for cattle or tillage, and are more neatly, and less wastefully, fed or farmed. Some acquaintance with *Hydrostatics* and the *Mechanic powers*, would aid you in many branches of your business.

Visit, often, every part of your farm; and fix beforehand, your work. View, frequently, not only your water courses, but all your enclosures, crops and woodlands; and note what is amiss. You will thus guard against evils consequent on negligence.

Show yourselves in your fields; in busy seasons especially. Your presence will animate the industrious, and stimulate the unfaithful and in-

dolent. More profit will arise, if your concerns are extensive, from such attentions, than from all you could accomplish by your personal labour confined to one object; to which, however, if your circumstances compel you to submit, you will soon discover the superiority, (according to the country phraseology,) of "come boys," to "go boys." The one ensures your work;—the other leaves it half done. If you are rich enough to employ an *Overseer*, you will be fortunate if *he* will not require *overlooking*.

Although some of the acquirements and duties herein recommended, may not be necessary to a mere practical farmer; they are not the less worthy of the attention of one who wishes and has it in his power, to gain a more perfect knowledge of his profession.

Casual failures should not discourage confidence in a general rule; nor controversies about theories, prevent perseverance in good practices.

XI. Be not discouraged by *casual failures*, from repetitions of good practises. Some seasons are more inauspicious than others, to some particular plants, or modes of culture. Confide in a general rule, although, in some instances, there may be successful exceptions. Avoid controversies about theories. A useful result is often neutralized, or lost, in a dispute on the cause or mode of producing it. A careful attention to *facts*, is far more instructive than the most elaborate discussions on theories.

Summer Dung to be collected; and how to be treated. *Hot lime* injurious, and some remarks on *Dung*, and its state of fermentation.

XII. Gather all your SUMMER DUNG; dropped near fences and hedge rows, (if you will suffer such incumbrances,) and under trees, and mix it with earth, on a ploughed head-land, to save it from sun, winds, and dung-beetles. All dung should be covered either with earth or a roof, to prevent evaporation and waste of its most valuable ingredients. Mix no *hot* lime with your muck, dung, or compost-heap, before fermentation has ceased, or sufficiently advanced, as it injures moderate fermentation, and often consumes the muck. Instances, of even conflagration of strawy muck, by hot lime, to a great extent, can be given. No doubt, excess of fermentation is injurious; and over-rotted dung is not desirable. But extreme cases should not be resorted to, for instruction or argument. If lime be used, that slacked is always safest and best, when mixed with either dung or compost. A justly celebrated Lecturer, (Sir *H. Davy*,) objects to *watering* dung. But it can be proved, by many facts, that infinitely more losses and injuries to dung in stercoraries, have accrued from the *dry rot*, for defect of moisture, than can be produced in watering muck or dung, from any cause. In covered stercoraries, as all ought to be, watering judiciously is all essential. See, among other proofs, Mr. *Quincy's* account of his stercorary: 3d vol. Philadelphia Agricultural Memoirs, p.p. 292, 3, 4, 5.(*b*)

(*b*) *Extract from Mr. Quincy's account.*

"The area of my stercorary is 90 feet by 40, the cellar is in the shallowest parts 8 feet deep, in its deepest 12 and in the well, if I mistake not, 15.—It is open, nearly the whole length of one of its short sides, and one half of the long, viz. at the north and west, besides large openings at the east. There is always 4 or 5 feet atmosphere above the top of the manure, and between it and the barn floor: and a constant current setting one way or another. This gives the advantage of a free circulating air, which in general, in such cases, is not obtained.

"The great difficulty I have had to encounter, arises from the necessity of *an equal irrigation* of the heap; a difficulty, which must attend all permanently covered stercoraries. For water turned upon the heap through spouts, runs, in currents, and is not equally sprinkled over the heap, like rain; which is nature's process in this business. To obviate this difficulty, I have constructed a very simple machine, which answers perfectly. The stone piers, which support the beams of the barn, divide the cellar, lengthways, into three equal compartments. I have a box 6 inches deep, 4 feet wide, and about 13 feet long, which runs by means of wheels, upon a sort of wooden railway, made by strips of planks and fixed about a foot from the floor of the barn, this is perforated with suitable holes. A permanent spout extends through the middle of the cellar, and a moveable spout extends from this to the perforated box—regular openings are made in the permanent spout, which may be closed at will.—It is also closed at the end. By these means, the box is filled from the reservoir and pump, and each part successively irrigated, perfectly and with great ease. A man, by two day's labour, can irrigate my whole cellar, and if effectually done, twice in a season is sufficient.

I have been thus minute, because I thought the detail would not be unpleasing to you, and that I owed it to the interest you expressed in my project.

Winter Grain, subject to injury when sown the first year of *liming*.

XIII. *Sow no winter grain* the first year of liming fields. The crop is generally retarded in ripening, and caught by mildew, blight, or rust. The liming here meant, is one sufficient for durable improvement of the soil. Those who lay on lime in small quantities, which may do neither good nor harm, often, (not always,) escape injuries, though they gain no immediate advantages.

Nothing requires more attention to the nature and qualities of your soil, than the use of *lime*. If it be too lavishly applied, or too frequently repeated, without intervals of grass to furnish vegetable matter; or manures, either animal or vegetable, ploughed in for the *lime* (according to the country phraseology) to feed on; it renders your ground *lime sick*, and reduces it to sterility. Our caustic lime must be applied in quantities very far less than the *mild lime* of Europe, if we would avoid turning a highly beneficial auxiliary into a destructive scourge. No certain rules, as to quantity per acre, can be fixed, without a perfect knowledge of the soil to which it is to be applied. In all cases, moderate quantities, at first, are the safest. Our common lime is here meant; as much depends on the kind of lime applied. It must therefore be the study of those who apply lime, to discover its composition, or what is called its strength; before they can orm a correct opinion of its salutary or injurious uses. It would seem, that the *mild lime* had some fertilizing qualities *in itself*, otherwise the lavish use of it, whereof we read, cannot be accounted for. The lime of *burnt oyster shells*, is *mild*; and land of any tolerable staple will bear great quantities, beyond the proper allowance, to the acre of caustic lime. See Mr. *Adlum's* letter, page 100 of the fourth volume Phila. Memoirs. Many other instances might be adduced. Both large and small quantities operate at once. But it is fugacious; and compared with caustic lime, soon exhausted. Of the mild lime of England, seven hundred bushels have been put on an acre; and two hundred bushels are common. What is the strength of their mild lime compared with oyster shell lime, or with our magnesian or caustic lime, is unknown. Forty to sixty bushels of the latter, are amply sufficient, with us, for any worn acre; and for most of our worn land, too much, at the first dressing. What quantity of oyster shell lime is proper at first, is not yet ascertained. Repetitions of smaller quantities, at intervals, would be better than applications of too much at once.

Mere practical results being here intended, you must consult books, for technical and copious discussions on lime.

Selection and *change of Seed*. *Crossing* meliorates *Grain* and *Fruit*. *Quantity of Seed* to an acre. Variety of opinions concerning it. *Drill Husbandry*, and sowing in drills. *Plaster* sown on winter Grain. *Hessian Fly*; some remarks on it, and some guards against its injuries; *Wheats* believed to be capable of resisting them.

XIV. *Select the best seed of all your grain*; roll it in plaster, after wetting it, if you will not *steep* it. But a change of seed entirely, when the grain has been sown too long on the same farm, can be *at once* accomplished, by procuring a full supply from distant places, and the more distant the better, without waiting for the tedious process of gradual selection, however commendable the latter may be. All thoroughly experienced writers recommend changes.(*c*)

(*c*) On a matter, upon which opinions so contradictory are entertained, by men of equally good judgment and extensive experience, it would be presumptuous for the Editor of this paper to decide, who is right and who is wrong. From his own limited observation, and the comparison of facts adduced by different writers, he inclines to the opinion, that the benefit to be derived by *change of seed*, bears no comparison to that which results from a careful and judicious *choice of seed*, or of breeding stock.

When the farmer has come to a satisfactory conclusion, as to what kind of grain, or what breed of animals is best adapted to his purposes, all circumstances considered, we are persuaded that little then remains for him, but to choose, each year, from his general stock, such ears of corn or individual animals, as are most remarkable for those particular qualities, which induced him to adopt them for cultivation or for breeding. Thus, we are persuaded, those desirable properties may be, not only perpetuated, but enhanced from year to year, and brought speedily

Some distinguish between native and exotic plants. Our cultivated grains, particularly *wheat*, are exotic and should be frequently changed: though some instances of long continuance of the like crops from unchanged seed, may be produced. Where wheat is native, it is a mean *grass*; it being of the *Gramina* tribe. It has been improved to its new perfect state, by change of locality and culture, and by *crossing*; which is effected by sowing different kinds together. Wheat so crossed, has been proved to resist mildew and other maladies, when common wheat of one kind, in the same or adjacent fields, has been ruined. Melioration of plants by crossing is found to be so successful, that in England, they are in the practice of applying a similar process to fruit trees. Mr. *Knight* has been very fortunate in renovating their Orchards, by crossing, from applying the pollin of one kind to the pistil of another, different kinds of apples, so as to produce, in a course of time, a new and vigorous race of apple trees; the old kinds having been, for many years, in a state of irretrievable decay.

But the crossing must go no farther than the point of melioration; i. e. unnecessary repetitions should be avoided. The barriers of nature

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to a state of the highest susceptible improvement. Witness the experiments of *Bakewell*, in *forming* breeds of different kinds of live stock. Not by crossing the breed, but by breeding *in and in*, as it is termed. His object was to obtain the greatest quantity of meat and the readiest disposition to fatten, with the *least bone*. The bone in the leg of the *Bakewell Sheep*, of which an account was given in the second number of the *American Farmer*, was scarcely larger than the small end of a man's little finger.

The Gourd seed corn, of which we spoke in a former number, as being so remarkable for numbers of rows and length of grain, was much improved, in these respects, by selecting from the whole corn loft, for seed, such ears as excelled most in these particulars, and was at last brought, as the Editor recollects, to so great a degree of excellence, in these points, that it was not an uncommon thing to find ears having from thirty-four to forty rows. The Hon. Judge *Duvall* informs us, that he now has the cob of one which we gave him, from which he shelled forty perfect rows. It will often happen, that a particular stock of animals, may possess several desirable qualities, and yet be deficient in some excellent point possessed by some other breed, which, except in that point, may not be so good; in such case a *cross* in the breed is to be recommended—but when the farmer has obtained the desired combination of good qualities, then let him stop and breed *in and in*. We apprehend, that the *Bakewell* and the fine sheep of the Blakes and Reynoldses, on the cliffs of the Chesapeake Bay, in Calvert, would be an excellent cross.

To collect good seeds, according to the observations of Mr. Cooper, of Philadelphia, consists not in produding new seeds from distant places, as is generally supposed, but in selecting the best seeds of his own; which, though he has constantly sown or planted them in the same soil, every article of his produce is greatly superior to those of any other person who supplies the market, and they seem still in a state of improvement. He believed that no kind of incest would degenerate the breeds of vegetables, and therefore adopted the plan of Mr. Bakewell, in England, in respect to quadrupeds, who continued to improve his flocks and herds by the management of those, in which the properties he wished to produce, were more conspicuous, without regard to consanguinity or incest—let us here add the remarks of that enterprising genius and learned philosopher, Dr. *Darwin*, in his Phytologia, page 408.

"*To generate the best kinds of seeds* the most healthy plants must be chosen, and those which are most early in respect to the season; these should be so insulated, as to have no weak plants of the same species, or even genus, in their vicinity, lest the fecundating dust of weaker plants should be blown by the winds upon the stigmata of the stronger, and thus produce a less vigorous progeny.

"Where new varieties are required, the male dust of one good variety, as of the nonpareil apple, should be shed upon the stigmas of another good variety, as of the golden pippin; and it is probable some new excellent variety might be thus generated.

"Mr. Knight has given a curious experiment of his impregnating the stigmas of the pea-blossoms of one variety with the farina of another. He says, Treatise of Apple and Pear, page 42. "Blossoms of a small white garden-pea in which the males had previously been destroyed, were impregnated with the farina of a large clay-coloured kind with purple blossoms. The produce of the seeds thus obtained, were of a dark gray colour, but these having no fixed habits, were soon changed by cultivation into a numerous variety of very large and extremely luxuriant white ones; which were not only much larger and more productive than the original white ones, but the number of seeds in each pod was increased from seven or eight to eight or nine, and not unfrequently to ten. The newly made gray kinds I found were easily made white again by impregnating their blossoms with the farina of another white kind. In this experiment the seeds, which grew towards the point of the pod, and were by position first exposed to the action of the male, would sometimes produce seeds like it in colour, whilst those at the other end would follow the female.

"In other instances, the whole produce of the pod would take the colour of one or other of the parents; and I had once an instance in which two peas at one end of a pod, produced white seeds like the male, two at the other end gray ones like the female, and the central seeds took the intermediate shade, a clay colour. Something very similar appears to take place in animals, which produce many young ones at a birth, when the male and female are of opposite colours. From some very imperfect experiments I have made, I am led to suspect, that considerable advantages would be found to arise from the use of new or regenerated varieties of wheat, and these are easily obtained, as this plant readily sports in varieties, whenever different kinds are sown together." See sect. VII. 2. 6. of this work."

must not be broken down. Hybridous (*d*) mixtures are unfruitful and worthless.

Our grain plants do not tiller, or stool, as formerly; and especially those necessarily sown late, to escape the *Hessian Fly*. A greater quantity of seed must therefore be allowed, than our predecessors were in the habit of using. One would imagine, that in countries celebrated for agricultural knowledge, the point of thick or thin sowing had been long settled. Yet, in *England*, the *Farmer's Journal*, (a most valuable publication) is filled with disputes on this subject, especially on the question, whether poor land should or should not be sown thickly, and rich land thinly?—Poor land should not be sown at all, with wheat, or any grain requiring much nutriment, if any adequate return be counted upon. It seems that spring wheat is sown thick, as far as three bushels to the acre, in the month of April, or beginning of May. A kind—the *triticum æstivum* of the Botanists, may be hoed, dibbled, or harrowed in, on bare places, where grain sown in autumn has failed; and will ripen with the autumn sown grain. It is bearded, with white straw and reddish grain, and does not mildew. The *Talavera*, or Spanish wheat, is now in great credit in England. Possibly spring wheat would *generally* escape the fly. No successful means have been taken to gain a *perfect* knowledge of agricultural facts, in regard to this formidable foe, although we have so long suffered under its desolating ravages. *Oats* may sometimes attract the fly and save your wheat; as *buckwheat* sown or accidentally growing among corn-hills, invites the grub from your corn-plants.

The *drill-husbandry*, and seeding with instruments for sowing in drills, calculated to save, as well as more regularly to distribute and nourish the seed, have had many vicissitudes of opinion and practice in Europe. *Here*, experience has been so much confined to a few, that it would be hazardous to pronounce, decisively, concerning it. It has zealous advocates; and should be an object of experiment, where circumstances warrant and require the practice.

Some contend for the efficacy of plaster sown *on* the winter grain, both for its beneficial operation on the growth of the plant, and to *repel the fly*. In the "Inquiries on Plaster," republished in the 2d volume of the Philadelphia Memoirs, a suggestion of its uses to repel the fly was made; and lately it has been alleged, that it has been attended with success. But as to its use in increasing the growth or productiveness of the plant, great differences of opinion exist. When grass, (clover especially) is sown *on* the grain, as is now the common practice, plaster is apt to throw up the grass so luxuriantly, that it injures the growth of the wheat or rye, by keeping the lower joints of the stems so moist and tender, as to check the circulation of the sap; and cause them to lay or fall, when the heads are formed, and become heavier than the straw will support; though they are often mere chaff, through want of sustenance which is engrossed by the grass. Still the practice has respectable advocates.—Clean and good farming, with a sufficiency of

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(*d*) *Hybridous*—a "hard word." It is derived from *hybrida*, latin, and means begotten between animals of different species.

sufficiency of manure, admitting late sowing so that the flights of the flies are, for the most part over, before the young wheat plants are in sufficient forwardness to afford a lodgment for the eggs or nits of the fly, seem to be the best guards against its ruinous ravages. Wheats with solid straw, resist the compression of the indurated tegument containing the nits, whilst pipy stems yield to its pressure, and when the head is formed, become prostrated by its weight. The yellow bearded wheat has been found to escape injuries from this inveterate destroyer. Some other kinds have been spoken of, as having similar properties.

[*To be continued.*]

On the Kelp, or Sea Weed,

AS A MANURE.

Knowing, as we do, that a great quantity of *kelp*, or as it is usually termed, sea weed or sea ore—is cast upon the shores of farms in Maryland, lying on tide water, the following communication of experiments, as to its utility, as a means of fertilizing land, caught our attention in the *Richmond Inquirer*, in February last, and was read with special interest. Of all species of litter for farm yards and stables, this appears to be the best, because independently of its own fertilizing powers, it serves as well at least as any other litter, for absorbing and retaining other manures with which it readily and advantageously compounds. Observing that some time had elapsed since the date of Mr. *Griffin's* memoranda, and presuming that in the mean time he had multiplied his experiments, we took the liberty of addressing him, soliciting the results of his subsequent observations. The letter, bearing date May 26th, 1819, is the reply with which we have been politely favoured, and for which we repeat our acknowledgements.

We have understood, that Col. *Maynadier*, the President of the Agricultural Society, at Annapolis, is making trial of the *kelp*, on his land, and we shall endeavour to procure the result.—It is probable, that it will act with more or less efficacy, according to the saltness of the water with which it is saturated, at the time of being thrown upon the shore, and the interval which elapses between that and the time when it is applied either to the farm yard, or to the land. In all situations, however, it must be a valuable resource, either as a manure in itself, or a ready means of collecting and increasing other manures, and ought to be husbanded accordingly.

PAPER LAID BEFORE THE AGRICULTURAL SOCIETY OF VIRGINIA, AT THEIR LAST MEETING.

"The splendours of royalty, and the trophies of ambitions, may elevate the voice of adulation, but they expire with the hour, and the monarch. They, indeed, are the benefactors of mankind, who bestow on posterity their most refined pleasures, and their most *useful speculations*."

Yorktown, Nov. 8, 1818.

SIR,

Being of that class of society denominated agricultural, I beg leave through you (the organ of communication) to tender to the "Agricultural Society of Virginia," my thanks for their exertions to revive the almost expiring husbandry of our country. I have been much gratified in the perusal of their proceedings, and I hope edified by the communications they have given to the public. Let them steadily proceed in their laudable objects; they will soon receive the meed of their useful and patriotic labours, in the applause and gratitude of their fellow men, and the delightful reflection of having advanced the character and prosperity of their country.

When I reflect that agriculture is the only source whence man, and I may say almost all animated nature, derive the means of subsistence, I am astonished at the neglect, and apparent contempt, with which she has been treated. Indeed until within a few years, the pursuits of husbandry were not deemed the most reputable, or honourable. What! can that be aught than reputable, which gives bread to man? Can that be aught than honourable, which increases individual and national prosperity? And yet, when on one side I view with exultation, the increasing commerce of this nation, unfurling her swelling canvas to every breeze, and on every sea; nurtured, and supported, by legislative aid and legislative protection: on the other I am apalled by the melancholy picture which her *elder twin sister*, Agriculture, presents—sinking under unmerited neglect, and pining in unassisted obscurity, apparently "the world forgetting," certainly "by the world forgot."—"Look on this picture, and on that," and laying your hand upon your heart, deny, if you can, that the industry and enterprise of mankind have been too long diverted from a pursuit and occupation, which seems to have been marked by heaven, as their most useful (and consequently) honourable avocation. The "Agricultural Society of Virginia," having thrown open the doors of inquiry, and solicited the lights of experimental knowledge, I beg leave to obtrude upon their time, and to offer to them the results of some crude experiments on substances for manures. The patriotic and enlightened president of your society, has been pleased to say, (and very justly) that "the first necessity of agriculture, is fertility;" permit me to add, that the grand arcanum of good husbandry, is the production of the greatest possible quantity of fertilizing earth. In the present exhausted state of our lands, produced by the unaiding and unrelenting culture, (I mean no disrespect to their memory) of our progenitors, it becomes absolutely necessary to resort to artificial and natural manures to restore their lost fertility. Fully impressed with this belief, a few years past, my attention was drawn to a marine vegetable, which promises to reward the labourer for his toil—the "kelp," or "sea weed" as it is commonly termed. This is an indigenous plant, growing on the beds of our rivers, and thrown upon their shores by the tides. I commenced my experiments in 1809, thus: I covered a space of land of ten acres with kelp, about three inches deep; it was taken from the shore in an undecayed state, and dripping with the salt water of the river. A cart load of ten or twelve bushels in its wet state (it is very heavy) was deposited at each angle or corner of a space of land five yards square; these bulks were spread inward of the square, until they met, and were equally diffused over the whole surface they were intended for. When the whole space of ten acres was thus covered, it was immediately ploughed in, with the largest plough then in use among us: this was done in winter—the ensuing summer this field was planted with corn. The average product of it was three barrels per acre. The soil was light, some grit and some shell intermixed. The corn on the piece thus manured, took an earlier start in vegetation than the corn in the adjoining land, and throughout the summer preserved its superiority in colour and luxuriancy. The product, (I write only from memory, having preserved no memoranda of any of my experiments) was, as well as I can now recollect, fifty-eight barrels of clean, sound, long corn.

Encouraged by this experiment, the ensuing spring I attempted one other with kelp. Four acres of land of the quality above described, were well covered in the manner above stated, and "turned in," and in March sown with oats, as was the surrounding land. The oats on the sea-weed land soon manifested a decided superiority, distinguishable by their increased height, and rich, deep green colour, which they maintained over the other oats until the period of ripening. The produce I cannot state, because not measured; as much of the crop was lost, by the falling or "lodging" of the oats, the consequence of their extreme luxuriance. If I mistake not, you, sir, were a witness of this experiment; you saw the oats in the month of May, and I remember the expression of your conviction of the value of kelp as a manure.

Not satisfied with these experiments, I proceeded to the trial of kelp as a manure for tobacco. A half acre of land, in a field of eight acres, was covered with kelp, solely; the rest of the field was well manured from cow pens and stables. At first, the plants in the hills of the part where the kelp was, appeared feeble, nor grew with the vigour of the plants around them. In June, a drought of three weeks' duration took place; when, to my astonishment and delight, I perceived these plants to become of good colour, shortly assuming a healthy dark green hue, and shooting forward during this dry spell of weather, they recovered from their inferiority, contending for mastery with the plants around them, which they soon acquired, and preserved. All the plants in the field were topped to ten leaves. The kelp land produced a dark strong tobacco—the rest of the lot was of a yellower cast, and milder when smoked. Never expecting to communicate this experiment, except orally to my friends, I have preserved no memoranda of weights or quantity. I am satisfied the weight was greater, in proportion to the number of plants, in the kelp than that of the other manured land.

These experiments of kelp as a manure for corn, oats and tobacco, leave with me no doubt that it will also be found beneficial to wheat, on a fallow. I shall proceed to this experiment in the course of the ensuing summer.

You will perceive, sir, that the experiments detailed above, were all made with the green and wet vegetable, yet fresh from the bed of the river. I have never used it, in a compost, nor in a decomposed state; but doubt not, its efficacy would be enhanced if decomposed before it is used as manure. The immediate operation of

the kelp, in its green and undecayed state, I have attributed to the muriate of soda it contains, and to the animal substances found intermixed with it; which are chiefly of that class usually denominated "nettles," which, being gelatinous, are speedily decomposed after inhumation. In all the experiments I have made with kelp, I have observed that the spot where the wet load was deposited, always produced a more luxuriant vegetation for the first year, than the other portion of land which was covered after the kelp had remained some days exposed to the rays of the sun, and consequent evaporation.

In some minor experiments with dry sea weed, I have found it not so immediately active as the green, and wet with our salt river water; which has induced me to suspect that our river water may be made a source of improvement to our husbandry, if used as a menstrum in composts. The kelp I have found to be longer in the process of decomposition than any other vegetable I have used. In the fields where I have used kelp, in 1811, 1812, I found many detached parcels of it yet unrotted the last year, (1817) when fallowing for corn. Hence it would appear a durable manure, gradually yielding its fertilizing properties: nor did I perceive the crop on the land when last tilled, to be inferior to that which grew the year the "weed" was first applied. I have no doubt but that a compost of kelp and marl or any calcareous substance, laid in alternate strata of each, and the salt river water occasionally applied as a dissolvent, would produce a manure, equal, if not superior in value, to any now in use. To the husbandman of this section of the state, kelp is an easily attained, and, in my opinion, estimable manure. In the southern banks of this river, and the banks of the creeks which discharge their waters into it, vast bodies, I may almost say inexhaustible supplies of marl are to be found, which, when the industry of our agriculturists shall bring into use in the compost above suggested, will, I am certain, so far increase the fertility of the soil, as to check the tide of emigration, and dissipate the Alabama mania which now rages among our citizens. I shall proceed to other experiments, and on a different soil, with the kelp; and shall occasionally continue my communications, if the Society shall deem them worthy of their attention.

The agriculture of our country can only be improved by the dissemination of correct principles of the science and practice of husbandry; the experiments of skilful farmers; and improvement in implements of husbandry. These are, (I presume) some of the objects, which called your "Society" into existence

I fear, sir, I shall have trespassed upon the time and patience of the Society. If so, I "cry their mercy." If they shall find any useful matter contained in the present communication, I shall have attained the object I had in view when I commenced it, to afford my mite to the stock of agricultural information. I have been thus minute in detailing the experiments, and my observations growing out of them—that should any of my countrymen be disposed to use the kelp as a manure, they may do so with the experience of which I am possessed; and should I by this communication induce a single person to an effort to improve his soil, I shall be amply rewarded. I have thought, (ever since I did think upon the subject) with the celebrated "Dean of St. Patrick's" that he who makes two blades of grass grow where only one grew, is of more value to society, than all the politicians and statesmen of an age. Holding this faith, I tender to the "Agricultural Society of Virginia," the homage of my high respect for their characters, and the noble cause in which they are engaged: and to you, sir, the assurance of my esteem and friendship.

THOMAS GRIFFIN.

Dr. JOHN ADAMS, Secretary of the Agricultural Society of Virginia.

TO THE EDITOR.

dated—*York-Town, Virg. May 26th*, 1819.

MY GOOD SIR,

Your polite favour of the 26th ultimo, was duly received; for which, and the several numbers of your valuable and interesting paper the ("American Farmer") which accompanied it, accept I pray you, my sincere thanks. Such publications as you are now engaged in, cannot fail to be beneficial to society, if the friends to agriculture, and the practical portion of our husbandmen, will communicate the results of their efforts, and experience. It is a melancholy truth, that the votaries of Ceres, have too long slumbered in the dormity, of (at least apparent) indolence; certainly they have too long withheld from society, the light they might have afforded. The establishment of state agricultural societies, will probably arouse them from their sloth, and I hope, (with you) dissipate their reluctance to appear before the public. The state of, almost hopeless exhaustion, to which a continued series of bad husbandry, had nearly reduced a large portion of the country around me, had drawn my attention to the subject of manures, and particularly to the kelp or sea weed, with which, our rivers near the Chesapeake abound; my experiments exceeded my most sanguine expectations, and though I was aware, that the communications of them, to the Agricultural Society of Virginia, would be uninteresting to a large portion of the members; yet it might possibly find the way to that section of the state, where this manure could be procured, and thus my object be answered. The notice you have proposed to take of this communication, demands my acknowledgments.

I will now answer, as far as my experience will permit me, the queries contained in your letter.—1st, I have no data on which to form a decided opinion of the effects of gypsum on land to which the kelp has been applied. I have hitherto made no experiments of the combined effects of these manures, but I am induced to believe, their agency would not be so beneficial; because the muriate of soda, we find in the sea-weed, if brought into direct contact with the sulphate of lime, or plaster of paris; might by this direct combination, destroy the active properties of the gypsum, or plaster. 2dly, Nor can I think, that the kelp and plaster act in the same way; the active agent of the sea-weed, being the muriate of soda, with which it abounds particularly when fresh; that of the plaster of paris, being sulphate of lime. I am sir, no chymist, and hazard the above opinions with much hesitation. 3dly, You inquire if plaster of paris, acts beneficially on our lands bordering on salt water. The experiments made with gypsum in this part of the state, have been few, and unmatured. I have myself made only one trial of it. We are much infested here, with a grass termed the "wire grass" and a vine bearing pea, called the "Patridge pea." I had prepared a lot of ground for red clover; and the seed sown in the fall, rose well; the spring twelve months succeeding, I took off an early crop of hay, and plastered immediately one third of the lot. The plaster evinced no effect for some days, when suddenly the pea and "wire grass" were seen to rise luxuriantly, and both continued to grow to the entire destruction of the clover. When the pea came to maturity, and sunk after seeding, the wire grass continued to increase; the clover disappeared. Hence it would appear, that plaster of paris is a beneficial agent, in the production of grasses on lands bordering on salt water rivers; for though, in the experiment above cited, I lost my clover, yet an ample crop of other grasses succeeded, which viewed as manures would have been equally valuable: the quantity, not species of vegetable only, being the desideratum among farmers, who raise grasses for live, or green manures.

You are pleased sir, to request, to be furnished with "notes of any other particulars which subsequent experience" may enable me to make. I am fond of gardening, and frequently amuse myself in personally assisting in this culture, which if not extended, so far as to produce fatigue, I have found, conducive to my health. The last summer I made a horticultural experiment of the sea-weed as a manure for the potato, (*solanum tuberosum.*) I planted twenty hills with potatoes, with the sea-weed at the bottom; which weed had previously passed through my stables, as litter for my horses. Twenty hills more, were planted with the kelp, fresh from the river. Twenty other hills were planted, and the common cow-pen manure used, another twenty hills were planted with the ashes from a vessel, from which lie had been drawn. The lixivium had been drained from the ashes, some time, and the ashes were obliged to be pulverized, before application to the hill. They were (each parcel) cultivated in the same manner, and on the same soil, a light loam; the potato planted with the cow manure rose earlier, and maintained a superior luxuriance of top, or vine, over all the rest; the stalk of the potato, which had been manured with the kelp from the stable, presented a healthier appearance, in size, and colour, than either of the others; I carefully watched their growth, and when the stalk by its declining, or rather decay, evinced the time of maturity of the vegetable, I had the whole dug, and each separately measured. The product from the hills manured with kelp from the stable, was one fourth greater than either of the other parcels; the potatoes were considerably larger though fewer in number; and when dressed for the table, were dryer (or as it is commonly termed, more mealy) than those taken from either of the other hills. In number (not in size) the cow-penned hills far exceeded. The produce from the hills where the other manures were used, was large and nearly equal. I thus found by this small experiment, that either of these manures were valuable in the culture of the potato, but especially the kelp;

which had passed through the stable; and I have been enabled to account for the superiority of the kelp from the stable, only from the combined effects of the salt or muriate of soda which the sea-weed contains, and the volatile salts and nitre which it had imbibed while in the stable, which appear to have had an early, and active effect upon the weed; as, when the potatoes were dug, a much less quantity was found of this weed, than in the hills where the wet weed from the river had been deposited, and consequently a greater decomposition of the vegetable matter had taken place. I am satisfied that the kelp passing through a stable, or farm pen, will be found an invaluable manure, for all grain crops, as well as bulbous rooted vegetables; and with this manure, I should be much disposed to contest the palm for the *Solanum Tuberosum*, with the wonderful *Ruta Baga*, as food, of greater nutrition for man, as well as animals. The effects of the sea-weed will be felt, as long after it has passed through the farm pen, as if it were applied to the soil fresh from the river; but where it abounds as much as it does on the shores of the Chesapeake, and her tributary streams, no difficulty can arise in continually procuring a successive supply; and the farmer whose industry shall lead him to the use of this weed will, I am sure, soon find himself amply remunerated for his labour, and encouraged to persevere in its use—I should certaily prefer its passage through a farm pen; an earlier effect will be the one consequence; and imbibing active agents from the animal fœces, will be another; thus increasing its value, as an active pabulum for vegetable productions.

I fear, sir, I shall have transgressed, by this prolix communication. Soon after I received your letter, I was called from home upon necessary business, which has been the cause of delay, in answering it; and which I hope will be deemed sufficiently exculpatory of me, from the charge of designed neglect. Prior to the reception of your letter, I had procured some plaster of Paris for the purposes of experiment. I have been recently engaged in some experiments with se- weed, plaster, unslacked lime, and marl, d. ently united, and applied; these have been, v the present growing crop of corn; as yet no effects are visible; if any valuable, should arise (if desired) they will be communicated. I lament that you have thought it necessary to apologise. As members of the same great family, we are bound to afford any light or information we may possess, to each other, and to the community, by which its prosperity may be advanced. My feeble aid shall not be withheld.

Be pleased to accept the assurances of respect, of sir, your humble servant,

TH. GRIFFIN.

J. S. SKINNER, Esq.

FOR THE AMERICAN FARMER.

DOMESTIC MANUFACTURES.

No 3.

The practicability of success, in Domestic Manufactures, has been thought doubtful, on account of a supposed *scarcity of hands* in the United States.

In comparing the population of the country, with the quantity and quality of its lands, every one must acknowledge, that there is room enough to admit of a great increase of husbandmen, not only for the settlement of places entirely uncultivated, but also for the good culture of those already settled. But cannot manufactures flourish in the United States, until there shall not be found in the wide waste, between the Atlantic, and the Pacific, a single spot capable of admitting an additional cultivator? Who dare say, that millions of civilized people will relapse to the savage state of the Indians of the forests, and wear the unmanufactured skins of wild beasts? And yet such must be the case, unless somebody can divine the ways and means of paying foreigners for cotton, woollen, and linen goods, enough to satisfy *their* demand, in a state of civilization and taste for dress.

There can be no difficulty in procuring hands, notwithstanding the facility of entering upon agricultural pursuits.

In the great mass of population, there is no inconsiderable number of persons, incapable of performing the labours in agriculture, and yet capable of rendering essential services in various departments of manufactures. Women, children, of both sexes, and men rendered infirm by age or other causes might be found, in numbers, sufficient to perform a large part of the manual labour requisite in manufacturing cotton, wool, and flax; while necessity, humanity or custom, would exclude them from agricultural employments. More than one half of the persons, employed in the cotton factories of Great Britain, are women and children. And here we cannot but remark, that this peculiar attribute of manufactures, is alone, on the principal of economy, sufficient to balance all objections, that can be made to the policy of encouraging them. How important it is to furnish a very useful employment to a vast number of individuals, who, without it, must live in idleness and mischief, devouring the fruits of industry, and corrupting the morals of society! At the low wages of fifty dollars per annum, the annual value of one mil- of persons would be fifty millions of dollars; sum equal to above half of the national debt!

Machinery might be more extensively used in the United States than in any other country in the world. It would be attended with the greatest possible advantage without the least disadvantage. If there be a *scarcity of hands*, it would supply the want of them; and there could be no workmen thrown out of employment by the introduction and use of it—none to suffer and growl for being deprived of the means of subsistence. The streams, in every state, and in almost every county in the Union, abound with powerful water falls. The country affords an abundance of wood, coal, and other combustible materials, necessary for the production of steam Machines, used as extensively as they might be, would almost entirely supercede the necessity of any manual labour, except that which women and children are adequate to perform. It should be considered, that the mechanic powers would be a vast capital to the nation. For while they would consume neither meat, drink, nor clothing, they would perform the work of a vast number of hands. There was lately invented in France, a machine for shearing cloth, which could daily accomplish the work of above eighty men. The shearers resisted its use, because it deprived them of the employment to which they were accustomed. What a capital thing would this machine be for the United States!

Foreigners would nearly or quite supply the requisite manual labour. We are told that 1800 are weekly landing on our shores, a majority of whom are probably mechanics of some kind, and many, especially of the English and Irish emigrants, are doubtless, spinners, weavers, clothiers, dyers, &c. We hear that multitudes are thrown out of employment in England, who, in spite of the restrictive law of non-expatriation, will find their way to the United States, even if they are obliged to come through France, as upwards of 500 lately did. They will cheerfully enter into factories if opportunity be offered them. The encouragement of Domestic Manufactures would not only give employment to foreigners compelled to seek an asylum in the United States, but would invite and draw hither men of skill and capital to add strength and beauty to the system. We have already many honourable examples of the success of foreigners engaged in the useful arts among us. The gentlemen Duponts, on the Brandywine, near Wilmington in Delaware, have rendered that stream as famous for its factories, as it is for the battles fought there by the heroes of the revolution. We need not look beyond our own city. Barker's foundery, in North Calvert Street, has been raised in a few years to its present state, by a foreigner, who came to this country pennyless and friendless. A noble example of the prosperity of industry, honesty, and economy! We quote the following article, from Niles' Weekly Register, of Saturday 29th ult. "One of the largest factories, at Leeds, has recently been shut up, and several hundred hands, in consequence, turned out of employ. The proprietor is about to remove to the United States, to resume his labours on an extensive scale." Glorious news! Let him be received with a hearty welcome. Such an accession will be of more real service to the country, than all the banks it contains; more than even all the speeches of congress, during the last session.

In the cities and towns on the Atlantic, there are thousands who will be compelled to abandon their residence, unless they be furnished with some means of subsistence more than commerce, without manufactures, can afford. Many, having practised mechanic arts, would be better capable and more inclined to labour in the construction and management of manufacturing powers, than in the business of clearing and cultivating lands.

Some part of the United States are pretty thickly settled, and could spare from agricultural pursuits, many hands, who would rather engage in factories on the spot of their nativity, among their friends and relations, than go far from home, to cultivate the waste lands of the west.

Whatever charms there may be in rural scenes, it would seem, that they have not been hitherto irresistibly attractive. Our cities and towns have been filled with tradesmen and professional men, with no very bright prospects; while the productions of the soil bore a very high price. And what additional attractions will agriculture hold out to the lovers of grain, when wheat flour is

four or five dollars per barrel, corn meal at about forty or fifty cents a bushel, cotton at twelve or fifteen cents a pound, and other articles at the same rate; with no prospect of better prices. Under such circumstances, it seems by no means imposible, that even *cultivators* should turn their hands to manufactures.

OPIFICI AMICUS.

THE MURRIAN,

A DISEASE INCIDENT TO HORNED CATTLE.

NO. III.

TO THE EDITOR OF THE AMERICAN FARMER.

SIR—Having stated summarily my impressions of the cause, character and treatment of the obstructed bowels, in the cattle of Pennsylvania. I will now trouble you with those of what the Murrian really is, and some explanatory remarks. The term Murrian, if its history is looked over in connexion with that of epidemics among black cattle, will perhaps be found applicable to them only in a low form of fever, with strong tendency to inflammation and mortification in various vital organs, the bowels especially, and not properly referable to any local or casual disease. The Pennsylvania disease not being epidemic, the application of the term Murrian to it, is falling in with the practical misuse of that term.

A disease frequent among cattle in England called Foul Water, appears similar to that of the Pennsylvania disease. Dr. Darwin, referring to it as notorious, without describing it in his Zoonomia, class i. ii. 1, 7, under the head *Hamorhagiæ Renum*, says, "Cows are subject to bloody urine, called foul water, by the farmers; in this disease 60 grains of opium, with or without as much rust of iron, given twice a day in a ball mixed with flour and water, or warm ale, are I believe, an efficacious remedy, to which however, should be added, two quarts of barley or oats twice a day, and a cover at night, if the weather be cold;" evidently considering it a local disease arising from some specific cause, which he does not intimate, and precribing a remedy, which I have suggested as applicable to its last stage, and in which stage only he may have considered or administered it, in consequence of the early symtoms having been overlooked, as must often occur in brute animal diseases. Under the head *Pestis* or *Plague*, class, ii. 1, 3, 13, Dr. Darwin notices what is no doubt the true epidemic Murrian, as follows:

The *pestis vaccina*, or disease amongst the cows, which afflicted this island about half a century ago, seems to have been a contagious fever, with great arterial debility; as in some of them, in the latter stage of the disease, an emphysema, could often be felt in some parts, which evinced a considerble progress of gangrene beneath the skin. In the sensitive inirritated fevers of these animals, I suppose about sixty grains of opium, with two ounces of extract of oak-bark, every six hours, would supply them with an efficacious medicine; to which might be added thirty grains of vitriol of iron, if any tendency to bloody urine should appear to which this animal is liable. The method of preventing the infection from spreading, if it should ever again find access to this island would be immediately to obtain an order from government to prevent any cattle from being removed which were found within five miles of the place, supposed to be infected, for a few days; till the certainty of the existence of the pestilence could be ascertained, by a committee of medical people. As soon as this was ascertained, all the cattle within five miles of the place should be immediately slaughtered, and consumed within the circumscribed district; and their hides put into lime-water, before proper inspectors.

Larrey's Memoirs, by Dr. Hall, vol. ii. p. 85, gives the history of a similar epidemic in Italy, in 1793, sweeping as it were in a torrent through the whole brute creation of the country. In it, obstructed bowels was a leading symtom and the yielding of them on the third day, attended by cutaneous perspiration was always favourable, while on the contrary, under continued obstruction "the abdomen became inflated, the hair dry and stiff, and easily disengaged by the fingers; the strength failed; the ears became withered and pendant. Cutaneous perspiration ceased, the breath grew fetid, respiration difficult, the animal tottered, and if it fell, had not power to rise. Sometimes at this second period, the intestines relaxed spontaneously, for the copious discharge of a black fetid excrement. To this succeeded an almost constant dysenterick flux of blackish, bloody matter, equally fetid; the debility increased, and the animal died. Malignant tumors appeared sometimes on cows, near the udder." Bleeding early was useful, and if delayed, proved very injurious. Other correct histories might be adduced, exhibiting the same character and course of disease, while numerous writers are found even of some repute, describing badly, and treating worse, these and other diseases confusedly as Murrian, under the titles Murrian in the guts, in the throat, in hog, dry Murrian, &c. The above references and explanations may tend in some degree to show what the Murrian really is, and what it may be readily mistaken for, and thereby lead to correct present mistakes and to encounter future evils. I am not aware, that such a disease ever has or can prevail in America, but comparing our climate with those congenial to it, such an event would not be deemed impossible, and could not fail to prove vastly calamitous in the present crude state of our knowledge of these matters. Every climate, however, has its epidemics, and in the present state of general science, it is certainly a deep opprobrium to any civilized country to be unacquainted with those at least, which belong to it. The Murrian, as here viewed, has been generally described as possessing a peculiarity almost sufficient to characterize it, viz. invading almost indiscriminately all orders of animals, contrary to the general principal, that each race, has at least its peculiar epidemic diseases—but the existence of such a peculiarity, may well be questioned, not only on account of its deviation from the general law, but in the facts that the specific structure, habits and susceptibilities of each race, precludes such a pervading influence, and that if it did not, the same causes so diversely applied must necessarily produce different effects or forms of disease. This character in the constitution of different kinds of animals, goes so far, that numerous agents, deadly poisonous to some, are nutritive to others, as the water hemlock, to cows and goats, &c. See Anderson's Agriculture, vol. ii. p. 56.

A universal mortality then cannot well be ascribed to a specific cause and may be otherwise accounted for. Under these circumstances, it seems strange, that Dr. Darwin should class a "*Pestis Vaccina*" murrian or plague in cattle, under the head "*Pestis*" or plague in the human species, especially as the region of the Nile, the nest and nursery of the plague, is so fabulously prolific, of brute animals as to have ascribed to its waters fœcundating properties. That Larrey should consider the human species susceptible of brute animal contagion in Italy, notoriously the elysium of human health, and a Pandora box to that of the brutes—or that our Dr. *Rush* should identify the yellow water of horses with bilious remittents, when the marshes, the factory, and reservoir of them, habitually provide luxuriant bed and board for the beast. And may not the father of poetry have displayed more science in it, than skill in surgery, when he consolidated the brute and human diseases of the Grecian camp into one epidemic, seeing that in fact all climates, in their influences on health, are universally favourable to them. How else could it happen, that through the long annals of the world, and black catalogue of epidemics, a common mortality should rarely concur in them; that even when human havoc was so wide and so awful—

"That o'er the friendless bier no rites were read,
"No dirge slow chanted, and no pall outspread."

Still every creeping thing should pass the fiery ordeal unhurt. The simple cause seems to be that luxuriant vegetation, and the seasons which cause it are conducive to the health of brutes, and destructive to that of man.

BALTIMORE:
FRIDAY, JUNE 11, 1819.

INTERESTING EXTRACTS.

Roman Agriculture—Gibbin; Athenian Agriculture—Abbe Barthelemy; American Agriculture—Governor Clinton.

It has been the misfortune of our country to look upon Agriculture as a grovelling, vulgar pursuit. Thus men of fortune have devoted their best educated children, to what are emphatically termed, the "*Learned Professions*," leaving to the most neglected and illiterate, the cares and the interests of husbandry. Fortunately for the reputation, not to say the salvation of the republic, we begin to form a more just estimate of the dignity and the rational and varied delights of agriculture. We begin to see, that the most beautiful and enlightening sciences are connected with, and necessary to, the successful operations of the plough and the pruning hook. If there be any, who, entertaining false estimates of its true character, as a science, still refuse to educate their sons with a view to the pursuits of agriculture, as an honourable and elegant voca-

tion, we would recommend to their perusal, the following extracts, to show, that some of the greatest and most eloquent historians and statesmen, in different ages and countries, have not thought the subject unworthy of their attention; and to show that such inquiries are not incompatible with splendid proficiency in other branches of knowledge.

EXTRACT NO. I....*Gibbon.*

"Whatever evils either reason or declamation have imputed to extensive empire, the power of Rome was attended with some beneficial consequences to mankind; and the same freedom of intercourse which extended the vices, diffused likewise the improvements, of social life.

In the more remote ages of antiquity, the world was unqually divided. The east was in the immemorial possession of arts and luxury; whilst the west was inhabited by rude and warlike barbarians, who either disdained agriculture, or to whom it was totally unknown. Under the protection of an established government, the productions of happier climates, and the industry of more civilized nations, were gradually introduced into the western countries of Europe, and the natives were encouraged by an open and profitable commerce, to multiply the former, as well as to improve the latter. It would be almost impossible to enumerate all the articles, either of the animal or the vegetable reign, which were successively imported into Europe, from Asia and Egypt; but it will not be unworthy of the dignity, and much less of the utility, of an historical work, slightly to touch on a few of the principal heads. 1. Almost all the flowers, the herbs, and the fruits, that grow in European gardens, are of foreign extraction, which, in many cases, is betrayed even by their names: the apple was a native of Italy, and when the Romans had tasted the richer flavour of the apricot, the peach, the pomegranate, the citron, and the orange, they contented themselves with applying to all these new fruits the common denomination of apple, discriminating them from each other by the additional epithet of their country. In the time of Homer, the vine grew wild in the island of Sicily, and most probably in the adjacent continent; but it was not improved by the skill, nor did it afford a liquor grateful to the taste of the savage inhabitants. A thousand years afterwards, Italy could boast, that of the forescore most generous and celebrated wines, more than two-thirds were produced from her soil. The blessing was soon communicated to the Narbonnese province of Gaul; but so intense was the cold to the north of the Cevennes, that in the time of Strabo, it was thought impossible to ripen the grapes in those parts of Gaul. This difficulty, however, was gradually vanquished; and there is some reason to believe, that the vineyards of Burgundy are as old as the age of the Antonies. The olive, in the western world, followed the progress of peace, of which it was considered as the symbol. Two centuries after the foundation of Rome, both Italy and Africa were strangers to that useful plant; it was naturalized in those countries; and at length carried into the heart of Spain and Gaul. The timid errors of the ancients, that it required a certain degree of heat, and could only flourish in the neighbourhood of the sea, were insensibly exploded by industry and experience. The cultivation of flax was transported from Egypt to Gaul, and enriched the whole country, however it might impoverish the particular lands on which it was sown. The use of artificial grasses became familiar to the farmers both of Italy and the provinces particularly the Lucerne, which derived its name and origin from Media. The assured supply of wholesome and plentiful food for the cattle during winter, multiplied the number of the flocks and herds, which in their turn contributed to the fertility of the soil. To all these improvements may be added an assiduous attention to mines and fisheries, which, by employing a multitude of laborious hands, serve to increase the pleasures of the rich, and the subsistence of the poor. The elegant treatise of Columella describes the advanced state of the Spanish husbandry, under the reign of Tiberius, and it may be observed, that those famines which so frequently afflicted the infant republic, were seldom or never experienced by the extensive empire of Rome. The accidental scarcity, in any single province, was immediately relieved by the plenty of its more fortunate neighbours.

Agriculture is the foundation of manufactures, since the productions of nature are the materials of art. Under the Roman empire, the labour of an industrious and ingenious people was variously, but incessantly employed, in the service of the rich. In their dress, their table, their houses and their furniture, the favourites of fortune united every refinement of conveniency, of elegance, and of splendour, whatever could sooth their pride, or gratify their sensuality. Such refinements, under the odious name of luxury, have been arraigned by the moralists of every age, and it might perhaps be more conducive to the virtue, as well as happiness of mankind, if all possessed the necessaries, and none the superfluities of life. But in the present imperfect condition of society, luxury, though it may proceed from vice or folly, seems to be the only means that can correct the unequal distribution of property. The diligent mechanic, and the skilful artist, who have obtained no share in the division of the earth, receive a voluntary tax from the possessors of land; and the latter are prompted, by a sense of interest, to improve those estates, with whose produce they may purchase additional pleasure. This operation, the particular effects of which are felt in every society, acted with much more diffusive energy in the Roman world. The provinces would soon have been exhausted of their wealth, if the manufactures and commerce of luxury had not insensibly restored to the industrious subjects, the sums which were exacted from them by the arms and authority of Rome. As long as the circulation was confined within the bounds of the empire, it impressed the political machine with a new degree of activity, and its consequences, sometimes beneficial, could never become pernicious."

TO CORRESPONDENTS.

We are truly gratified in acknowledging the receipt of several very interesting, and as we think, very valuable communications on the leading subjects of our paper. Amongst others, one from FRISBY TILGHMAN, Esq. of Washington County, with whose name and place of abode, the idea of rich land and skilful farming is always associated. His communication was made at our particular request, and gives a minute account of the produce of his farm, and the precise course of its cultivation.

We are favoured also, under a late request, by that veteran patriot, JAMES H. M'CULLOCH, the Collector of this Port, with a communication of his experience, as to the cultivation, qualities and value, of several kinds of artificial grasses; and

We are very much pleased, in giving notice of the receipt of No. 1, of a promised series of essays, on the raising of hedges, or *live fences.*

Agricola will accept our sincere acknowledgments, for taking up the subject of the state of Agriculture, in the lower counties of Maryland. The theme is a fruitful one, and we are glad to find it in such competent hands—though we could not have supposed the writer could have found leisure, in the midst of professional business, to investigate this interesting subject so thoroughly, as he seems to have done.

Present Prices of Country Produce,

IN THE BALTIMORE MARKET.

TOBACCO.—Since the old crop was sold off, after the war, there has never been, at one time, as much tobacco for sale in this market.—The mention of this fact, with a few actual sales within the last week, giving *names and places*, will enable the planter to form an idea of the state of the market.—As to speculating about the state of the market in Europe;—the present posture and future prospect of affairs in our own country; the causes of our embarrassments, and the probability and means of relief—with a view to sagely predicting whether the article is likely to rise or fall, we beg leave to be excused.—We have not the mercantile capacity, or experience, for it. A thousand shrewd prophecies might be made, by the speculator, to show that it *would fall;* and the Planter may fancy as many reasons why it may be expected to *rise.* Our province is with *facts*, diligently collected, and honestly detailed.

The fine yellow *Tobacco*, of Frederick County, which has been selling for $18, may be quoted at $12.—Some *Tobacco* made on the estate of the late *Lloyd Dorsey*, on E k Ridge, sold yesterday morning, for 5 a $7.—lCrop Tobacco, 3 hogsheads, from Mrs. *Reynolds'* Calvert County, sold for 7 a $8; some made by *B. Essex*, same County, for 5 5-8, second; and $7 5-8 crop.

Virginia *Tobacco*, sold by *J. P. Pleasants & Son*, middling quality, $7—first quality, $8.50.

Corn 50 cts.—Wheat $1 12 1-2—Rye 55, a 70—Oats 50—Eggs, per doz. 18 cts.—Butter, per lb. 31.—Beef, best butcher's, 12 1-2—Mutton, 6 a 8—Veal, per quarter, from the wagons, 1 25 a $1 50—Potatoes, retail, $1 per bushel—Green Peas, per peck, 25—Hay and Straw, each 16 a $18—Herrings, per barrel, $3, a little more than the cost of barrel and salt. Wool Cards, 62 1-2—Cotton do. 62 1-2 a 75.

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